FIG. 1

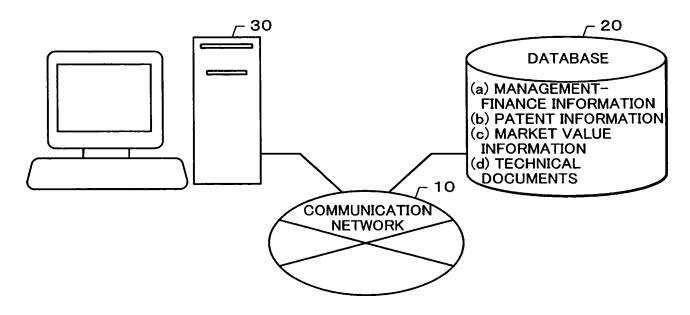
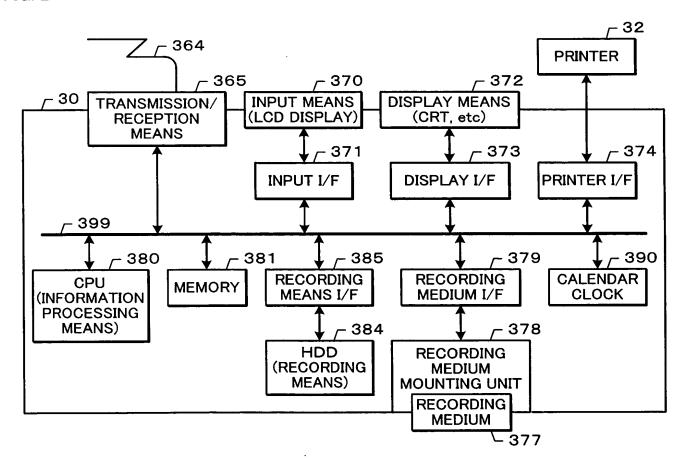


FIG. 2



### (a) MANAGEMENT-FINANCE INFORMATION

(A) Information on Size of Company	(B) Financial Informatio	n of Company	(C) Combined Information of Company
Number of employees	Sales volume	Total assets	Sales volume per employee
Number of officers	Sales profit	Tangible fixed assets	R&D cost per employee
Capital	Operating profit	Amount of capital investment	Sales profit per employee
Number of plants/offices	Gross operating profit	Depreciation costs	Operating profit per employee
Ground floor area	Sales profit ratio	Patent royalty income	Gross operating profit per employee
Total floor area	Operating profit ratio	Financial assets (liquid assets and liquid liabilities)	
Ownership ratio of premises	Gross operating profit ratio	Interests paid/discounts	
Ownership ratio of building	Total market value to total assets ratio	Long-term prime rate (long-term borrowing rate)	
Number of employees (consolidated basis)	Total market value to stockholders' equity ratio	Short-term prime rate	
Number of officers (consolidated basis)	Total market value to sales volume ratio	Interest on bonds	
Capital (consolidated basis)	Total market value to gross operating profit ratio	10-year government bond yield ratio	
Number of plants/offices (consolidated basis)	Total market value to operating profit ratio	Personnel costs, (including officers compensation and labor costs)	
Ground floor area (consolidated basis)	Gross operating profit to total assets ratio	Welfare expenses	
Total floor area (consolidated basis)	Gross operating profit to stockholders' equity ratio	Capital stock	
Ownership ratio of premises (consolidated basis)		Total number of outstanding shares	
Ownership ratio of building (consolidated basis)	Operating profit to Stockholders' equity ratio	Stock price (Nikkei Stock Average)	
	Stockholders' equity ratio	Taxes and public charges	
	Balance of total market value and stockholders equity		
	R&D cost		
	R&D cost to sales volume ratio		
	R&D cost to operating profit ratio		
	R&D cost to gross operating profit ratio		

#### (b) PATENT INFORMATION

(A) Application	Related Matters
Filing date	Number of filings
Application number	Number of request for examination
Title of the invention	Number of filings based on IPC
Inventors	Number of filings based on keywords
Applicants	Number of claims filed
Scope of claims	Years spent on examination requests
Abstract	Number of inventors
IPC	Number of applicants (number of joint applications)
FI	Number of domestic priority-claiming applications
F term	Number of domestic priority bases claimed in applications
Agents	Number of priority bases from foreign countries
Publication date	Number of applications in which an exception to loss of novelty is requested
Publication number	Number of applications in which examination is requested before laid-open
Existence of request for examination	Number of divisional applications
Date of request for examination	Number of withdrawn/abandoned applications
Priority date	Number of converted applications
Priority number	Number of expedited examinations
Date of publication of translations of PCT international application	realiser of fillings (in each country)
Number for publication of translations of PCT international application	Number of inventors in applications (in each country)
Date of domestic re-publication of PCT international application	Number of applicants in applications (in each country)
Number for domestic re-publication of PCT international application	Number of priority-claiming applications (in each country)
International filing date	Number of priority bases claimed in applications (in each country)
International application number	Number of divisional applications (in each country)
International publication date	
International publication number	
Designated countries	

#### (b) PATENT INFORMATION

(b) PATENT INFORMATION	
(B) Registration	Related Matters
Registration date	Number of registrations
Issue date of registration	Number of claims registered
Registration number	Number of expired patents after registration
Scheduled day of expiration of right	Years spent from application to registration
Date of publication of examined application	Patent registration rate
Publication number of examined application	Patent allowance rate
Annual maintenance fee payment status	Years spent from request for examination to registration
Number of final decisions for rejection	Number of applications in which preferential examination is conducted
Date of final decision for rejection	Number of rejections issued
Number of claims decided to be finally rejected	Number of amendments filed
Number of appeals against final decision for rejection	Number of amendments filed (for formalities)
number of abandoned/withdrawn applications after request for examination	Number of written oppositions filed
Number of abandoned/withdrawn claims after request for examination	Number of appeals and trials
Number of invalidation trials	Number of registrations for creating patent right
Appeal/trial number	Number of registrations for extending term of patent right
Date of decision to appeal/trial	Number of transferred patents
Number of claims demanded for invalidation trial	Number of registrations (in each country)
Number of appeals to dismissal of amendment or trials for correction	Years required for registration (in each country)
Number of oppositions	Years spent on examination (in each country)
Number of claims demanded for opposition	Number of rejections issued (in each country)
Inventors of registered patent	Number of amendments filed (in each country)
Number of inventors of registered patent	Number of amendments filed (for formalities) (in each country)
Applicants of registered patent	Number of oppositions filed (in each country)
References cited	Number of applications in which preferential examination is conducted
	Number of rejections issued
L	

"PATENT QUARTERLY JOURNAL" INDEX LIST OF ENTERPRISE VALUE EVALUATION SYSTEM

A: Business, Profit and Market Value Related Index (1)

		Ecrimical
Index Group	ındex	bining .
	estment Amount	{(Current Term Tangible Fixed Assets - Previous Term Tangible Fixed Assets)} + (Current Term Depreciation Cost)
(A) Investment	R&D Cost	Total Amount of R&D Cost
	nt Trend Index	Term-on-Term Ratio of {(Facility Investment Amount) + (R&D Cost)}
	t Efficiency	(Value Added Amount)/(Tangible Fixed Assets)
		(Value Added Amount)/(Number of Employees)
	Labor Equipment Ratio	(Tangible Fixed Assets)/(Number of Employees)
		((Personnel Expense to be Included in Selling Cost and Administrative Expenses) + (Labor
Í		Cost to be Included in Manufacturing Cost) / (Value Added Amount)
( <b>8</b> )		(Value Added Amount Rate of Change) - {(1 - Labor Distribution Share (10 value Added)) *
lanagement/Finan ce Analvsis	Management/Finan   Total Factor Productivity	(Depreciation Target Tangible Fixed Assets Kate of Change)} - {(Labor Distribution Shafe (To Value Added)) × (Number of Emplovees Rate of Change)}
		(Cost of Sales)/(Sales Volume)
	Cost of Sales-and-Administration Ratio to	(Selling Cost and Administrative Expenses)/(Sales Volume)
	Bearing Debt Ratio	(Interest Bearing Debt)/(Total Assets)
		(Equity Capital)/(Total Assets)
	Sales Volume	(Sales Volume)
		(Operating Net Profit) + (Interest Paid and Discount) + (R&D Cost) + (Depreciation Cost) +
	Value Added Amount	(Personnel Expense (including board members' remuneration)) + (Welfare Expense) + (Tax
		and Dues) (Operating Net Profit) = (Operating Profit) - (Interest Paid and Discount)
		(Operating Profit) + (R&D Cost)
		(Operating Profit) + (Depreciation Cost)
	Depreciation and Amortization (EBLLDA)	(Operating Profit)
(C) Profit Related	Operating Net Profit	(Operating Profit) - (Interest Paid and Discount)
Items	Patent Royalty Income	(Patent Royalty Income (Including Royalty Income of Trademarks and Brands, etc.))
	ROA α	[(Value Added Amount) + (Patent Royalty Income)]/(Total Assets)
	ROA B	{(GBP) + (Patent Royalty Income)]/(Total Assets)
	ROA y	{(EBITDA) + (Patent Royalty Income)[/(Total Assets)
	ROA δ	[(Operating Profit) + (Patent Royalty Income)]/(Total Assets)
		{(GBP) + (Patent Royalty Income)} - {(Financial Assets) × (Profit Katio m)} + {(Tangible
	Earnings on Intellectual Assets (EOIA)	Fixed Assets) × (Profit Ratio f) (Profit Ratio m): Application of Short Term Prime Rate; (Profit Ratio f):
	Pottura On Intellectual Assets (POIA)	<u>Application of Long 19m Prime Kate</u> (Famings on Intellactual Assats)/Total Assats)
	<u> </u>	(Edilligs of Illefectual Assets)/(Total Assets)

"PATENT QUARTERLY JOURNAL" INDEX LIST OF ENTERPRISE VALUE EVALUATION SYSTEM

A: Business, Profit and Market Value Related Index (2)

Index Group	Index	Formula
	Excess Value Added Amount	Sales Volume × {(Sales Volume Value Added Ratio) - (Industry Average Sales Volume Value Added Ratio)}
	Excess GBP	Sales Volume × [(Sales Volume GBP Ratio) - (Industry Average Sales Volume GBP Ratio)]
	Excess EBITDA	Sales Volume × [(Sales Volume EBITDA Ratio) - (Industry Average Sales Volume EBITDA Ratio)]
(D) Excess Profit Analysis	Excess Operating Profit	Sales Volume × [(Operating Profit Ratio (To Sales)) - (Industry Average Operating Profit Ratio (To Sales))]
	Excess ROA $\alpha$	(ROA a) - (Industry Average ROA a)
	Excess ROA $\gamma$	$(ROA \ r) - (Industry Average ROA \ r)$
	Excess ROA $\delta$	(ROA δ) - (Industry Average ROA δ)
	Excess Earnings on Intellectual Assets	Assets (Net Assets) × ((Ratio of Earnings on Intellectual Assets) - (Industry Average of Ratio of
- · · ·	(EXEOIA)	Earnings on Intellectual Assets)
	MVA	(Value of Stock) - (Shareholders' Equity) (Value of Stock) = (Total Number of Outstanding
		Stock) × (Stock Price)
	PBR	(Value of Stock)/(Equity Capital)
(M) Market		[(Fixed Liabilities) × (Profit Ratio a) + (Value of Stock) × (Profit Ratio p)] - [(Financial Assets)
Evaluation		<ul> <li>(Profit Ratio m) + (Tangible Fixed Assets) × (Profit Ratio f))) (Profit Ratio a): (Weighted Average of</li> </ul>
Related Items	Expected Intellectual Property Profit	Long Term Prime Rate and Bond Rate) × (1 - Corporate Tax) (Profit Ratio p): Calculated Based on Capital Asset
		Pricing Model (CAPM). Yield on Long Term 10-Year Government Bonds, Stock Investment Profit Ratio, $eta$ Value
		were used; (Profit Ratio m): Application of Short Term Prime Rate (Profit Ratio f): Application of Long Term Prime
		Rate
(PE) Patent	Patent Profitability α	{(GBP) + (Patent Royalty Income)]/(Total Number of Effective Patents)
	Patent Profitability $eta$	((Excess Value Added) + (Patent Royalty Income))/(Total Number of Effective Patents)
	Patent Profitability $\gamma$	((Excess GBP) + (Patent Royalty Income))/(Total Number of Effective Patents)
Kelated Items	Patent Profitability 8	(Excess Earnings on Intellectual Assets (EXEOIA))/(Total Number of Effective Patents)

"PATENT QUARTERLY JOURNAL" INDEX LIST OF ENTERPRISE VALUE EVALUATION SYSTEM

B: R&D and Patent Related Index (1)

ם. וואם מוום ו מוסות ווסומים ווומסא (י)		
Index Group	Index	Formula
	R&D Cost Ratio a	(R&D Cost)/(Sales Volume)
	R&D Cost Ratio $\beta$	(R&D Cost)/(Value Added Amount)
	R&D Cost Ratio 7	(R&D Cost)/(GBP)
(K) K&D Kelated	R&D Cost Ratio δ	(R&D Cost)/(Total Assets)
SUBSI	Number of Inventors	(Calculated Based on "Inventor" Column of Laid-Open Publications)
	Ratio of Inventors	(Number of Inventors)/(Number of Employees)
	R&D Cost per Inventor	(R&D Cost)/(Number of Inventors)
	Number of Patent Applications	(Joint Application is Recorded as One Application)
	Number of Claims Filed	(Sum of Number of Claims of Laid-Open Publications)
	Number of Claims per Patent	(Number of Claims Filed)/(Number of Patent Applications)
	Application	
(PA) Patent	Number of application per	(Number of Patent Applications (Other Than Joint Applications))/(Number of Inventors)
Application Deleted	Inventor	
Application related	Application related Number of Claims per Inventor	/Number of Claims Filed (Other Than Joint Applications))/(Number of Inventors)
sueil	(Patent Application)	
	Number of Joint Applications	(Number of Joint Applications Among Patent Applications Filed)
	Joint Filing Ratio	(Number of Joint Applications)/(Number of Patent Applications)
	Number of Applicants in Joint	(Number of Joint Applicants in Joint Applications)
	Patent Application Stock	(Cumulative Number of Patent Applications)
	Number of Examination Requests	Number of Examination Requests (Number of Examination Requests Filed)
(PR) Examination	Years to Examination Request	[ \(\Sigma\) (Number of Examination Request - Filing Date)]/[(Number of Examination
Dogract Dolptod	(Average)	Requests)×(Annual Number of Days)}
hequest helated	Examination Request Ratio	(Examination Request Ratio Pertaining to Number of Patent Applications of Each Year)
	Cumulative Number of	(Charilative Number of Evamination Beausets)
	Examination Requests	(Cultiviality Nutilities of Examination (Copies)

"PATENT QUARTERLY JOURNAL" INDEX LIST OF ENTERPRISE VALUE EVALUATION SYSTEM

B: R&D and Patent Related Index (2)

Index Croup	yapul	Formula
S Glodb	Number of Patents Granted	(Number of Patents Granted)
	<b>D</b>	(Number of "Claims" in Registered Gazette)
	Years to Patent Granted (Average)	[ ∑ (Patent Registration Date - Patent Filing Date)}/{(Number of Patents Granted)×(Annual Number of Days)]
(PT) Patent	(PT) Patent Patent Granted Ratio to Number of	(Number of Patents Granted Each Year)/(Number of Patent Applications Filed Each Year)
quisition)	Acquisition Patent Granted Stock	(Patent Granted Stock at End of Each Year)
Related Items	Patent Granted Ratio to Number of Examination Requests	(Number of Patents Granted Each Year)/(Number of Examination Requests Filed Each Year)
	Patent Granted Stock Ratio to	(Patent Granted Stock)/(Cumulative Number of Examination Requests)
	Number of Effective Patents Granted	(Number of Patents Granted Each Year) - (Number of Patents Invalidated Among Patent Registrations Each Year)
	Patent Application Productivity	(Number of Claims of Patent Applications in a year)/(R&D Cost in a previous year)
		Correction of (Patent Application Productivity). (Patent Application Productivity) × (Estimated
(PP) Patent	Examination Request Productivity	Examination Request Ratio) (Estimated Examination Request Ratio: Sought Based on Number of Examination Requests for Previous Applications in which the term for Examination Request is expired.)
Productivity	111111111111111111111111111111111111111	Correction of (Patent Application Productivity). (Patent Application Productivity) × (Estimated
	Patent Granted Productivity	Registration Ratio) (Estimated Registration Ratio: Sought Based on Number of Registrations of Previous Applications, Lapsed Years, Average Required Years to Patent Granted)
	Total Number of Effective Patents	(Patent Granted Stock) - (Patent Invalidation Stock)
40000	Patent Granted Renewal Ratio	(Total Number of Effective Patents)/(Patent Granted Stock)
o) Paterit	Years to Renewal Patent Granted	[ \(\Sigma\) (Scheduled Invalidation Date of Each Patent of the Total Number of Effective Patents - Year End)]
Slock Related	Expiration (Average)	//(Total Number of Effective Patents) x (Annual Number of Days)/
items	Patent Stock Index	(Total Number of Effective Patents) × (Years to Renewal Patent Granted Expiration (Average))
	Total Patent Assets	((R&D Cost)/(Number of Patents Granted)) ×(Total Number of Effective Patents)

"PATENT QUARTERLY JOURNAL" INDEX LIST OF ENTERPRISE VALUE EVALUATION SYSTEM

C: Patent Portfolio Related Index

Index Group	lndex	Formula
	Patent Application Portfolio analysis	(Power of Number of Claims Share Per Technical Field) (Share: Share of Each Technical Field in an
(PAP) Patent		Enerprise of Snare of each Enterprise in All Enterprises in a Lectrifical rieru.
Application	Patent Diversification Index (PDI)	(1 - Σ(Share of Each Technical Field in an Enterprise) <sup>2</sup> }
Portfolio	Patent Competitive Position Index	Σ[Σ (SEI Index Per Technical Field)] ×(Share of Each Company Per Technical Field)] × (1 + Excess
	(PCPI)	Growth Rate)
anaiysis	Average Patent Competitive Position	(Patent Competitive Position Index (PCPI))/(Number of Technical Fields covered by Company's Patent
	Index (Average PCPI)	Applications (Average in 3 Years))
(DKA)	Characteristic Variation	(Selected Keywords Having an Appearance Frequency That is Not Large in All Patent Publications and
(17)	Cialacteristic negwords	That is Large in Patent Publications of the Same Company)
Characteristic		(Representation of Character of an Enterprise by the Number of Keywords under a Constant Condition
Reywords	Reywords Indiriber of Characteristic Neywords	of Selecting the Characteristic Keywords)
	Patent Similarity Index	(Ratio of Patent Publications Having the Keyword of the Subject Patent Publication within a Population)
tacted (190)	Patent Similarity Index to the Same	Optent Similarity Index (PSI) Mhen the Donulation is the Same Company's Patent Publications)
וויין ויין ויין ויין ויין ויין ויין ויי	Company (PSIself)	(Faterit Offillianty Fidex (FO) When the Operation is the Carrie Carrie Carrier Carrier
Similarity	Patent Similarity Index to All	(Patent Similarity Index (PSI) When the Population is All Patent Publications Including the Other
Analysis	Companies (PSIall)	Companies' Patent Publications)
	Normal Patent Publication	(Patent Publications Having Significantly Large PSIall)
	Exceptional Patent Publication	(Patent Publications Having Significantly Small PSIall)

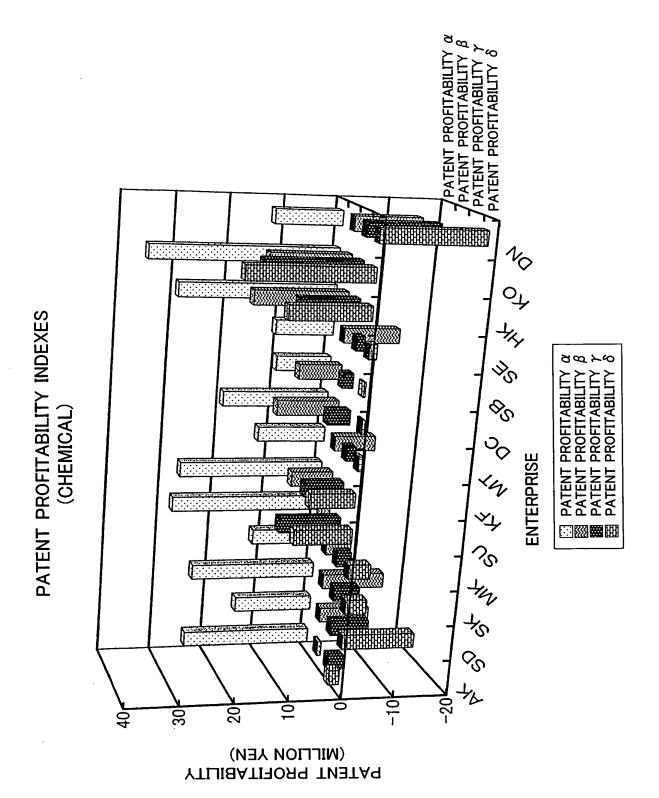
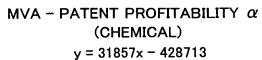
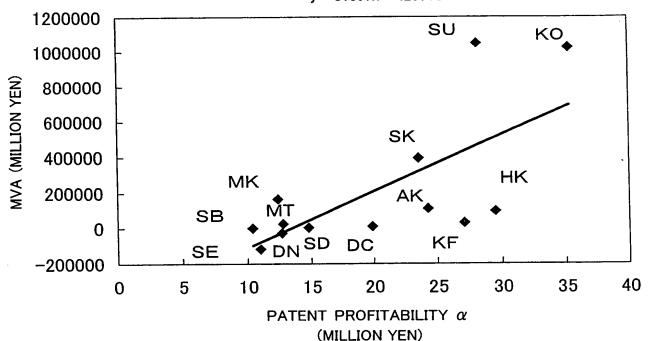
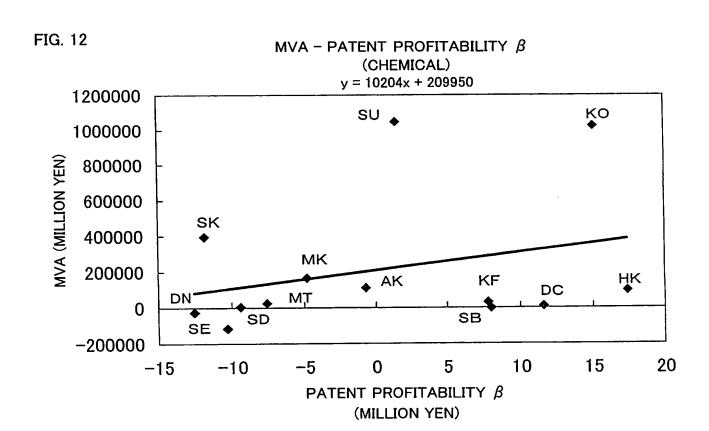


FIG. 11

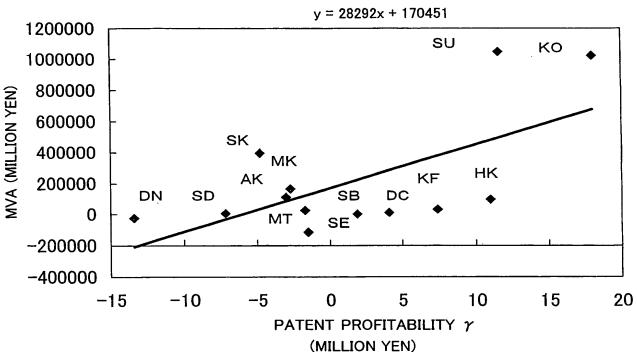


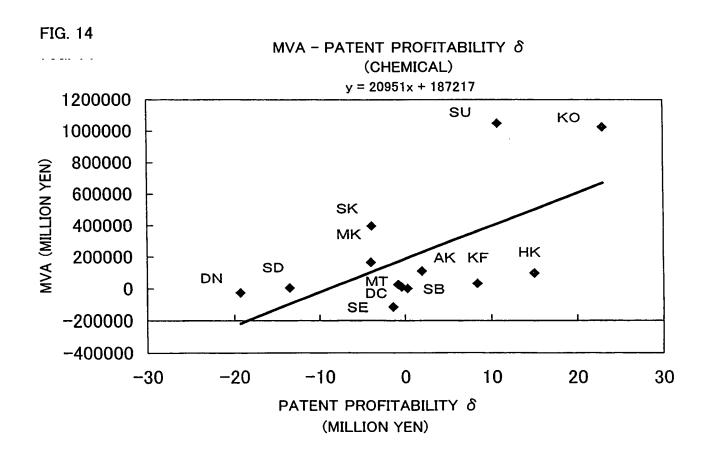


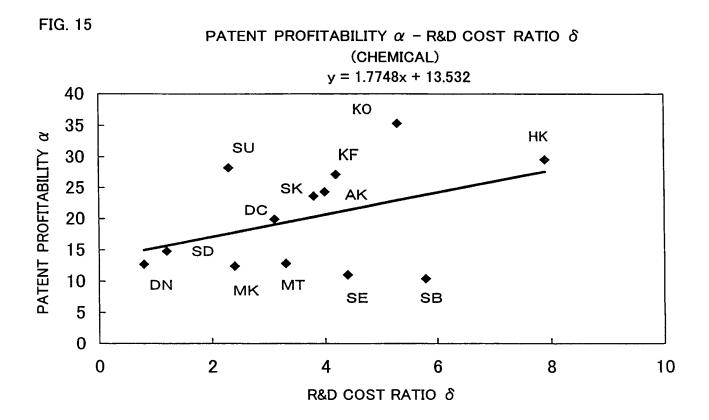


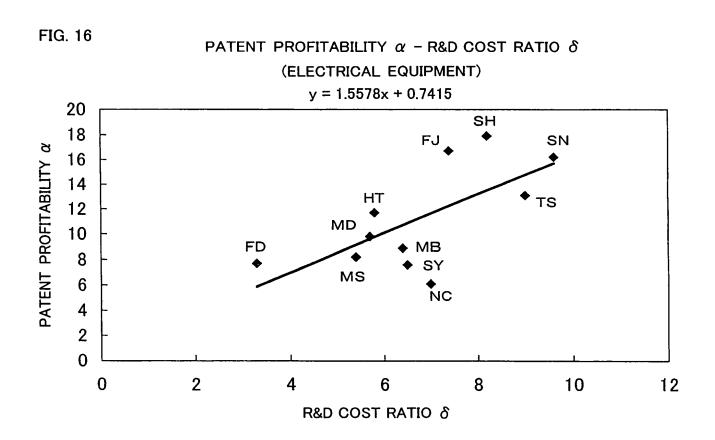


# PATENT PROFITABILITY $\gamma$ (CHEMICAL)



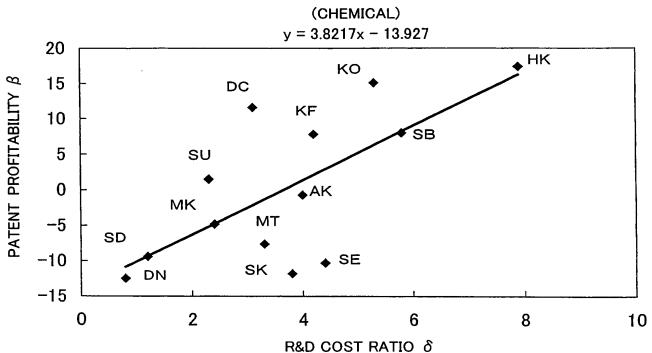


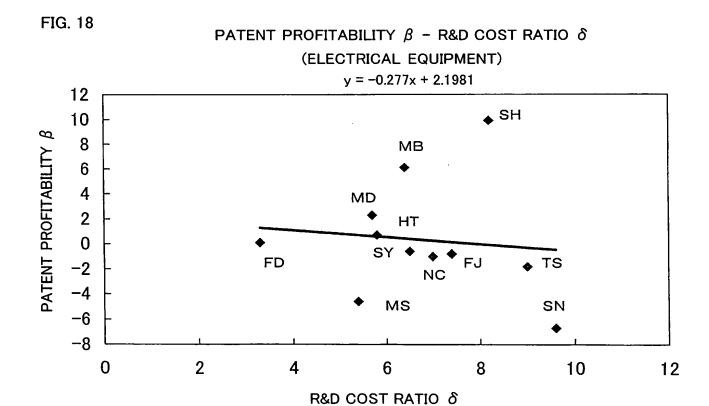


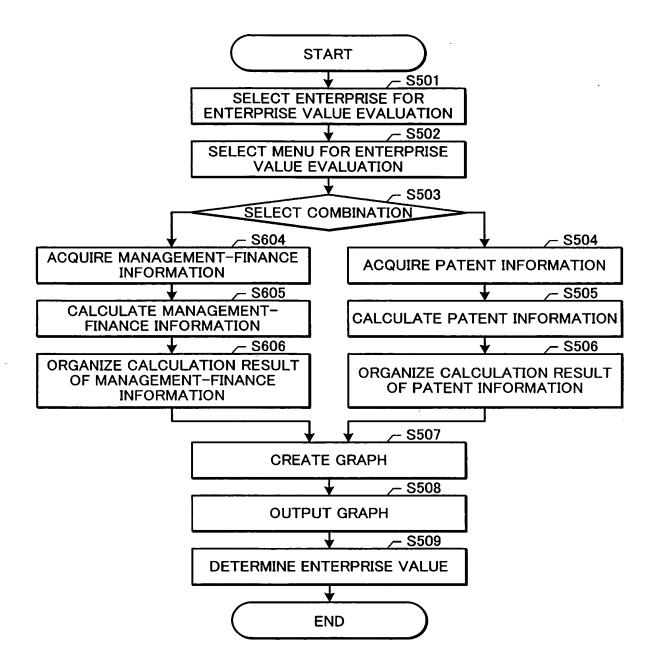




## PATENT PROFITABILITY $\beta$ - R&D COST RATIO $\delta$







		ENTERPRISE VALUE ENTERP	ITTI	NG (2)	BACK SET
	TARGET (1) All industries Industry	Food		TARGET (2) Industry Enterprise	
1	Enterprise	Ceramic		Enterprise	
	Other unit	Steel, nonferrous and metal		Other unit	Company name
		Machinery and shipbuilding			
١		Electrical equipment			
l		Automobile & transport machine			Company code
İ		Fabric, pulp and paper			
ı		Precision equipment		·	A 1: 1
_		Other manufacturing			Applicant code
		Construction			
		Information & telecommunication			
		Electricity and gas			Search
	•	Chemical			3341311
		Service			
		Pharmaceutical			

EN	NTERI	ENTERPRISE VALUE EVALUATION MENU (1)	L
SE	ELECT	SELECT INDEXES IN THE WINDOWS BELLOW	ELLOW SET
BUSINESS, PROFIT AND MARKET VALUE		R&D AND PATENT	PATENT PORTFOLIO
(A) Investment index (B) Management—finance analysis index (C) Profit related index (D) Excess profit analysis index (M) Market evaluation related index (PE) Patent profitability index	<b>_</b>	(R) Research and development related index (PA) Patent application related index (PB) Examination registration) related index (PP) Patent acquisition (registration) related index index (PS) Patent stock related index index	(PAP) Patent application portfolio analysis (PKA) Characteristic keyword list (PSI) Patent similarity analysis

EN	NTERPI	ENTERPRISE VALUE EVALUATION MENU (1)	NU (1)	
SEI	ELECT	SELECT INDEXES IN THE WINDOWS BELLOW		
BUSINESS, PROFIT AND MARKET VALUE		R&D AND PATENT	PATENT PORTFOLIO	
(A) Investment index (B) Management—finance analysis index (C) Profit related index (D) Excess profit analysis index (M) Market evaluation related index (PE) Patent profitability index		R) Research and sevelopment related index PA) Patent application elated index elated index PD) Examination request elated index PT) Patent acquisition registration) related index PP) Patent productivity ndex PS) Patent stock related ndex ndex	(PAP) Patent application portfolio analysis (PKA) Characteristic keyword list (PSI) Patent similarity analysis	

	BELLOW SET	PATENT PORTFOLIO	(PAP) Patent application portfolio analysis	(PKA) Characteristic keyword list	(PSI) Patent similarity analysis					
ENTERPRISE VALUE EVALUATION MENU (3)	SELECT INDEXES IN THE WINDOWS BELLOW		$\Box$ R&D cost ratio $lpha$	$\square$ R&D cost ratio $eta$	□ R&D cost ratio γ	■ R&D cost ratio δ	□ Number of inventors	☐ Inventor ratio	R&D cost per inventor	
ENTERPRISE V	SELECT INDEX	R&D AND PATENT	(R) Research and development related index	(PA) Patent application related index	(PB) Examination request related index	(PT) Patent acquisition (registration) related index	(PP) Patent productivity index	(PS) Patent stock related index		
		BUSINESS, PROFIT AND MARKET VALUE	(A) Investment index	(B) Management-finance analysis index	(C) Profit related index	(D) Excess profit analysis index	(M) Market evaluation related index	(PE) Patent profitability index		

	ENTERPRISE VALUE EVALUATION OUTPUT CONDITION SETTING BACK SELECT CONDITIONS IN THE WINDOWS BELLOW SET				
	MAP POSITION		OUTPUT DATA		
	1 map		R&D cost ratio α	none	$\exists$
	2 maps		R&D cost ratio $\beta$	top 5	][
	1 data sheet		R&D cost ratio γ	top 10	] [
	2 data sheets		R&D cost ratio δ	top 15	<b>]</b> [
]	1 map with data		COMMENT	top 20	]:
	2 maps with data		(free entry)	numerical inpu	균 [
	1 map with comment		-		_
Į	2 maps with comment				
	1 map with data and comment		1		
	2 maps with data and comment				